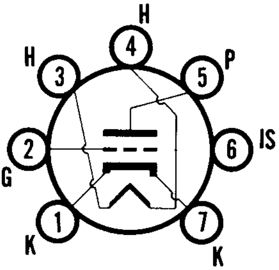



# SYLVANIA TYPES 6ES5 3ES5 2ES5

**VHF TRIODE**




7FP

## MECHANICAL DATA

| | |
|---|---|
| Bulb | T-5½ |
| Base | E8-1, Miniature Button 7-Pin |
| Outline | 5-2 |
| Basing | 7FP |
| Cathode | Coated Unipotential |
| Mounting Position | Any |

## ELECTRICAL DATA

### HEATER CHARACTERISTICS

| | 2ES5 | 3ES5 | 6ES5 | |
|---|---|---|---|---|
| Heater Voltage | 2.35 | 3.0 | 6.3 | Volts |
| Heater Current | 600 | 450 | 200 | Ma |
| Heater Warm-up Time[1] | 11 | 11 | | Seconds |
| Heater-Cathode Voltage | | | | |
| Heater Negative with Respect to Cathode | | | | |
| Total D C and Peak | 200 | 200 | 200 | Volts |
| Heater Positive with Respect to Cathode | | | | |
| D C | 100 | 100 | 100 | Volts |
| Total D C and Peak | 200 | 200 | 200 | Volts |

### DIRECT INTERELECTRODE CAPACITANCES (Shielded)

| | |
|---|---|
| Grid to Plate | 0.36 μμf |
| Input: g to (h+k+I.S.) | 3.0 μμf |
| Output: p to (h+k+I.S.) | 4.0 μμf |

### RATINGS (Design Center Values)

| | |
|---|---|
| Plate Voltage | 250 Volts Max. |
| Plate Dissipation | 2.5 Watts Max. |
| D C Cathode Current | 25 Ma Max. |
| Grid Circuit Resistance | 0.5 Megohms Max. |

### CHARACTERISTICS AND TYPICAL OPERATION

**Class A1 Amplifier**

| | |
|---|---|
| Plate Voltage | 200 Volts |
| Grid Voltage | −1.0 Volts |
| Plate Current | 15 Ma |
| Transconductance | 9500 μmhos |
| Amplification Factor | 70 |
| Plate Resistance (approx.) | 7400 Ohms |
| Ec for Ib = 100 μa (approx.) | −9 Volts |

**NOTE:**

1. Heater warm-up time is defined as the time required for the voltage across the heater to reach 80% of its rated value after applying four (4) times rated heater voltage to a circuit consisting of the tube heater in series with a resistance equal to three (3) times rated heater voltage divided by rated heater current.

## APPLICATION

The Sylvania Types 2ES5, 3ES5 and 6ES5 are semi-remote cutoff triodes designed for use as VHF RF amplifiers. Features of the design include: A partial shield between the grid and plate which lowers the capacitance between these two elements and promotes ease of neutralization; low input capacitance; and higher input impedance by virtue of dual cathode leads.